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THE DISTRIBUTION OF HIGH-SCHOOL GRADUATES AFTER LEAVING SCHOOL

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INTRODUCTION

Of late there has been much discussion concerning the relative rank of students who enter college from high schools. This suggests the question of the rank of students who pass from high school to normal schools. The present paper raises the question with regard to the students who enter the normal schools of New York from the high schools of the state. There is often such poor scholarly material among students who come to the normal schools that it is almost impossible to understand how some of them were able to pass high-school examinations, much less the "regents' examinations" set by the state department. Weak students, to be sure, are found in colleges just as they are found in normal schools. The relative number of weak students in the two institutions has never been determined. The interest in weak students should be extended so as to include good students as well, and a general canvass should be made of the relative grade of all students entering colleges and normal schools as well as of those entering other callings.

This study deals with several specific problems:

1. What is the percentage of high-school graduates who enter, respectively, colleges, normal schools, immediate teaching, professional schools, business, and trades?

2. In view of the number who enter college, is there ground for the popular belief that high schools are primarily college-preparatory schools?

3. What is the comparative rank of the students who enter colleges and those who enter the normal schools and the other callings?

SOURCE OF MATERIAL

The investigation was confined to students who were graduated from some of the high schools of New York state in June, 1908. In the consideration of grades general averages were not used, but averages in a limited number of subjects known to the schools as the "minimum requirements": i.e., English, 4 years; foreign language, 2 years; history, 3 years; mathematics, 2 years; science, 2 years. These are the subjects required in every good high school. They are also among the requirements for admission to college, and are required from students in New York state who enter normal schools. By using these subjects we eliminate all elective subjects. All the graduates are, therefore, considered upon the same basis.

It should be stated that the students whose grades are used are taken at random throughout the state. Some are from high schools that graduated one in 1908 and others are from high schools that graduated as many as sixty-eight. The class of 1908 was selected because when this investigation was begun the class of 1910 was the most recent class that had been graduated from the normal schools.

METHOD OF OBTAINING THE MATERIAL

In September, 1910, I wrote to the principals of the ten state normal schools asking for information about the normal-school class of 1910. I thus obtained the names of the students in normal schools and also the names of the high schools from which these students were graduated in 1908. After tabulating the information obtained from the normal schools, I sent the following letter to the principals of high schools, inclosing the blank for records:

MY DEAR SIR:

The name of your high school appears in a list from the principals of normal schools as one that has sent successful students to normal schools. I am making a comparative study of students in high schools as to whether they

NAME	ENGLISH				LATIN				GERMAN				FRENCH				MATH.		HISTORY			SCIENCE					SCHOOL, BUSINESS, OR TRADE
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	Alg.	Pl. G.	Am.	Eng.	Anc.	Phyl.	Bot.	Zoo.	Biol.	Phys.	
NOTE.—Give Regents' grades when possible.																											

enter colleges, normal schools, or take up some business or trade. The only way to make this study is by the grades of the students of some recent class, in the "minimum requirements." I have selected the class of 1908. Will you co-operate with me in this by filling out the inclosed blank with the names of the class of 1908 and their grades in the respective studies they may have pursued? If for any reason you cannot do this, will you return the blank to me?

Hoping I am not imposing upon you, I am

Very truly yours,

March 1, 1911

The result of this circular letter gave me the grades of 735 high-school graduates from seventy-five high schools. The passing grade of the students in the New York state high schools ranges between 100 and 60 per cent.

METHOD OF COMPARING STUDENTS

All of the students about whom information was collected were brought together into a single table (Table I). Those who received an average of 84 or better were thus found to be in the highest third of the group; all from 78 downward were found to be in the lowest third. Those receiving 83 and 79 were divided so as to make the groups equal. The facts reported in this table are represented graphically in Chart A.

Any given student who is placed in Table I in the highest third, middle third, or lowest third is retained in the same subdivision for purposes of comparison throughout the whole study. Thus of the 24 included in Table I as receiving the grade 88, eleven went to college and will appear above 88 in the college table and chart; three went to a normal school; none went to professional schools; five went directly into teaching; one went into business; none went into the trades; four remained at home. By following in this way all of the groups who received high, mediocre, and low marks, it is possible to judge something of the character of each group of students.

Tables II to VIII report the details as follows:

Table II represents the students who entered college.
Table III represents the students who entered normal schools.
Table IV represents the students who entered professional schools.
Table V represents the students who began teaching immediately.
Table VI represents the students who entered business.
Table VII represents the students who began a trade.
Table VIII represents the students who remained at home.

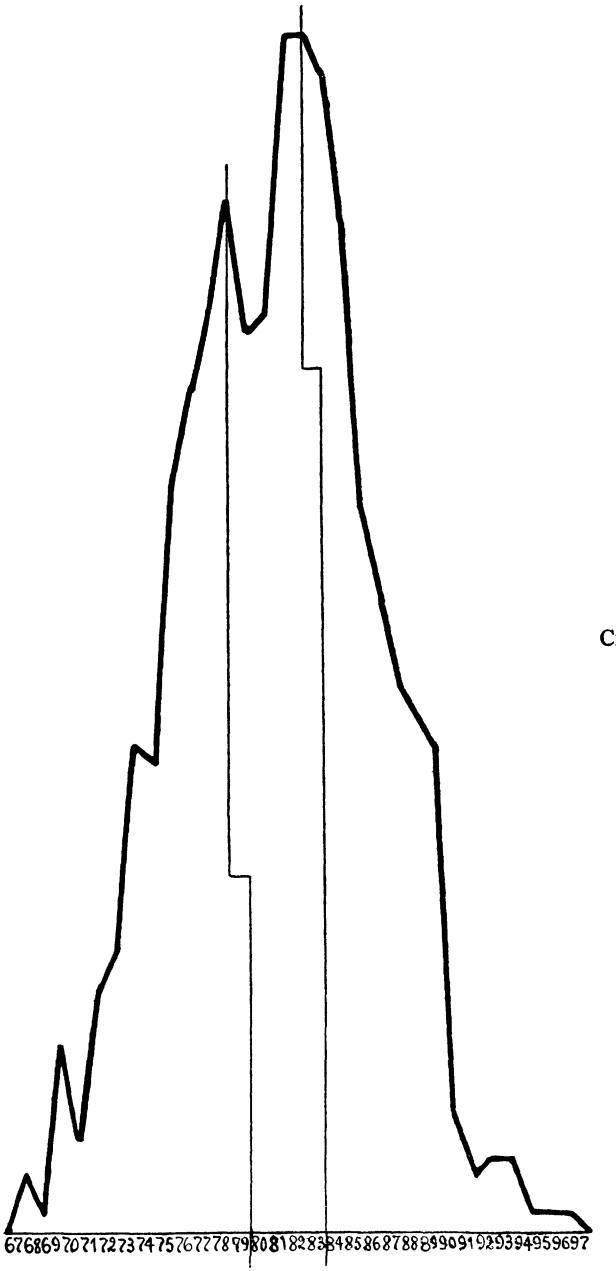

CHART A

CHART A shows the curve which represents the distribution of 735 high-school students who were graduated from 75 high schools in June 1908.

TABLE I

													36				16													
1	3	1	10	5	13	15	26	25	40	45	49	19	48	49	64	46	54	39	34	29	24	26	6	3	4	4	1	1	1	1
67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97

Seven hundred and thirty-five students who were graduated from 75 high schools. Below the horizontal line are the different high-school grades from 67 to 97. Above are the numbers of students whose averages in the minimum requirements correspond to the grade represented directly under. Thus there were 40 who averaged 76, 24 who averaged 88, etc. The groups at 79 and 83 per cent respectively are subdivided. All at the right of the line between 83 and 84 fall into the third who received the highest marks; all at the left of the line between 79 and 80 fall into the third who received the lowest marks; all between these lines fall into the middle third of the 735 graduates.

TABLE II

									14							11														
1	0	3	2	2	4	5	7	2	5	10	15	18	20	18	15	15	16	11	14	11	14	3	2	4	1	1	1	0	1	
68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	

Distribution of 247 high-school students who went to college. These constitute 34 per cent of the total.

TABLE III

											6							2												
2	1	3	1	5	4	16	4	9	3	9	6	13	3	13	5	5	7	3	2											
70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89											

Distribution of 122 high-school students, or 17 per cent of the total, who entered normal schools.

TABLE IV

											3																			
1	0	0	2	4	2	1	4	3	2	2	4	2	2	5	0	1	1	0	0	0	0	0	0	1						
69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93						

Distribution of 40 high-school students, or 5 per cent of the total, who entered professional schools.

TABLE V

											4				2							
1	0	1	0	1	3	4	6	7	10	9	2	5	3	10	6	6	11	10	5	5	4	2
68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90

Distribution of 117 high-school students, or 16 per cent of the total, who entered directly the teaching profession.

TABLE VI

												6				1												
1	0	0	1	1	1	0	5	5	4	5	8	4	3	8	7	5	8	2	4	1	1	2	1	0	0	1	0	0	1
67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96

Distribution of 86 high-school students, or 12 per cent of the total, who entered business.

TABLE VII

												3				2												
1	0	3	1	1	2	2	2	4	3	7	3	4	7	5	3	4	1	0	1	0	1	0	1					
68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91					

Distribution of 61 high-school students, or 8 per cent of the total, who entered the trades.

TABLE VIII

														1														
1	0	2	0	2	1	1	1	3	2	7	3	6	2	2	1	4	2	0	0	0	1							
72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93							

Distribution of 41 high-school students, or 6 per cent of the total, who remained at home.

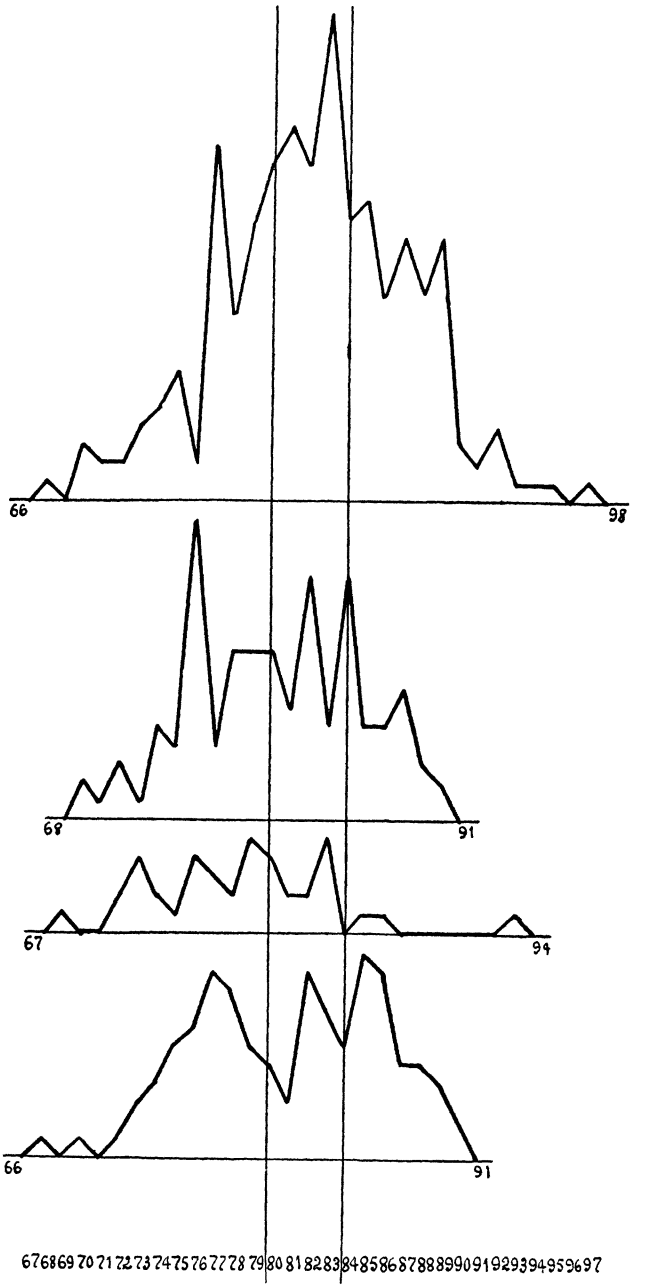

CHART B shows the curve which represents the distribution of 245 or 34 per cent of the 735 students of Chart A who entered college.

CHART C shows the curve which represents the distribution of 122 or 17 per cent of the 735 students of Chart A who entered normal schools.

CHART D shows the curve which represents the distribution of 40 or 5 per cent of the 735 students of Chart A who entered professional schools.

CHART E shows the curve which represents the distribution of 117 or 16 per cent of the 735 students of Chart A who began teaching at once.

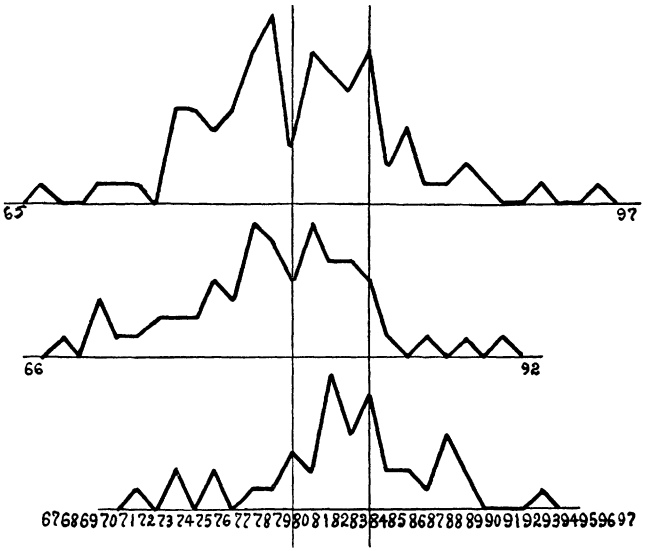

CHART F shows the curve which represents the distribution of 86 or 12 per cent of the 735 students of Chart A who engaged in business.

CHART G shows the curve which represents the distribution of 61 or 8 per cent of the 735 students of Chart A who began a trade.

CHART H shows the curve which represents the distribution of 41 or 6 per cent of the 735 students of Chart A who remained at home.

Chart J is added in order to show the relative numbers in each group. The height of the various blocks and the numbers given below each block indicate the later occupations of the 735 students under consideration.

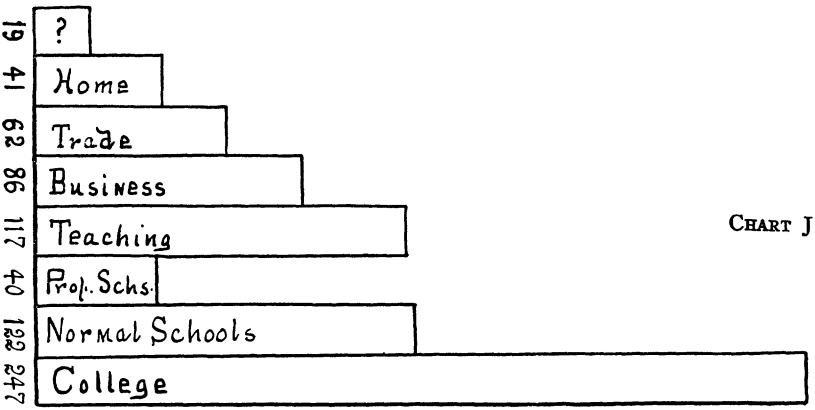

TABLE IX

	College			Normal School			Professional School			Teaching			Business			Trade			Home		
	Expected	Actual	Percentage	Expected	Actual	Percentage	Expected	Actual	Percentage	Expected	Actual	Percentage	Expected	Actual	Percentage	Expected	Actual	Percentage	Expected	Actual	Percentage
Highest tertile	82	102	41	41	37	30	13	3	8	39	45	39	28	22	27	20	10	16	14	19	46
Middle tertile	82	83	33	41	37	30	13	16	40	39	29	25	28	28	33	20	22	34	14	15	37
Lowest tertile	82	62	26	41	47	40	13	21	52	39	43	36	28	36	40	20	29	50	14	7	17
Highest quartile	62	83	33	30	26	21	10	3	8	29	37	31	21	14	16	15	9	15	10	8	19
Second quartile	62	64	25	30	35	29	10	7	18	29	24	20	21	21	25	15	10	16	10	21	51
Third quartile	62	63	25	30	24	20	10	13	32	29	25	21	21	29	34	15	23	38	10	7	18
Lowest quartile	62	37	17	30	36	30	10	17	42	29	31	28	21	22	25	15	19	31	10	5	12

Table IX brings together all the facts for the purpose of facilitating comparison of the various groups. This table is prepared as follows. The total number of students who went to college, namely 247, is divided in the upper part of the table into three subdivisions, in the lower part of the table into four subdivisions. The numbers set down under "Expected" show how many would appear in each subdivision if the college group were uniformly distributed throughout the various grades. Thus if the students who go to college were of exactly the same type as the whole group we should expect 82 in the highest third, and 62 in the highest fourth, etc. Under "Actual" is set down the number of students in each subdivision. Thus there were 102 students out of the highest third of the total 735 under consideration who went to college. This is twenty-two more than might have been expected if the college group had been of the average type. The 102 students in the first third constitute 41 per cent of all those who went to college.

The tables and charts show first that the group of students who go to college is larger than any other group and that the students belonging to this group are distinctly above the average.

The normal-school group is made up more liberally from the lower grades.

The professional-school group is small. The reason for the small size of this group is the fact that the professional schools are more and more requiring for admission college courses or special preparation after high school.

The other groups exhibit characteristics which are evident from the tables and call for no special comment.

CONCLUSIONS

Many conclusions are suggested by the facts reported above. The different vocations evidently attract different types of students. The college is conspicuous in its close relation to the high-school course. The preparation for the other vocations is less direct, and the facts suggest questions regarding the meaning of a high-school course. With reference to the normal-school group it should be pointed out that similar studies from different parts of the country are very much needed in order to show whether conditions in New York state are typical.